

### **AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions and listings of claims in the application:

#### **Listing of Claims**

1-3. (Canceled)

4. (Previously Presented) The method of claim 51, further comprising transferring MIPv6-related information from the AAA server in the home network to a home agent.

5-7. (Canceled)

8. (Previously Presented) The method of claim 51, wherein the protocol for carrying authentication information for network access is an extended Extensible Authentication Protocol (EAP) and the MIPv6-related challenge and response messages are incorporated as additional data in the EAP protocol stack.

9. (Previously Presented) The method of claim 8, wherein MIPv6-related information is transferred in at least one EAP attribute in the EAP protocol stack.

10. (Previously Presented) The method of claim 9, wherein the MIPv6-related information is transferred as EAP attributes of the method layer in the EAP protocol stack.

11. (Previously Presented) The method of claim 10, wherein the EAP attributes are EAP Type-Length-Value (TLV) attributes.

12. (Previously Presented) The method of claim 9, wherein the MIPv6-related information is transferred in a generic container attribute available for any EAP method.

13. (Previously Presented) The method of claim 9, wherein the MIPv6-related information is transferred in a method-specific generic container attribute of the method layer in the EAP protocol stack.

14. (Previously Presented) The method of claim 51, wherein the protocol for carrying authentication information for network access is selected from the group of the Protocol for carrying Authentication for Network Access (PANA), IEEE 802.1X, and Point-to-Point Protocol (PPP).

15. (Canceled)

16. (Previously Presented) The method of claim 4, wherein the MIPv6-related information is transferred from the AAA server in the home network to the home agent in an AAA framework protocol application.

17. (Previously Presented) The method of claim 16, wherein the home agent is a local home agent in the visited network and the MIPv6-related information is transferred from the AAA home server to the local home agent via an AAA server in the visited network.

18. (Previously Presented) The method of claim 16, wherein the AAA framework protocol application is an application of a protocol selected from the group of Diameter and RADIUS.

19. (Previously Presented) The method of claim 4, further comprising assigning, by the home AAA server, a home agent to the mobile node; and distributing by the home AAA server to the mobile node and the home agent, credential-related data for establishing a security association between the mobile node and the home agent.

20-21. (Canceled)

22. (Previously Presented) The method of claim 19, further comprising building, at the mobile node, a home address for the mobile node using at least a portion of the address of its assigned home agent; and transferring the home address of the mobile node from the mobile node to the AAA home network server using around trip of a selected EAP procedure.

23-30. (Canceled)

31. (Previously Presented) The system of claim 52, wherein the protocol for carrying authentication information for network access is an extended Extensible Authentication Protocol (EAP) and the MIPv6-related challenge and response messages are incorporated as additional data in the EAP protocol stack.

32. (Previously Presented) The system of claim 31, wherein MIPv6-related information is carried in at least one EAP attribute in the EAP protocol stack.

33. (Previously Presented) The system of claim 32, wherein the MIPv6-related information is carried in EAP attributes of the method layer in the EAP protocol stack.

34. (Previously Presented) The system of claim 33, wherein the EAP attributes are EAP Type-Length-Value (TLV) attributes.

35. (Previously Presented) The system of claim 32, wherein the MIPv6-related information is carried in a generic container attribute available for any EAP method.

36. (Previously Presented) The system of claim 32, wherein the MIPv6-related information is carried in a method-specific generic container attribute of the method layer in the EAP protocol stack.

37. (Previously Presented) The system of claim 52, wherein the protocol for carrying authentication information for network access is selected from the group of the Protocol for carrying Authentication for Network Access (PANA), IEEE 802.1X, and Point-to-Point Protocol (PPP).

38. (Canceled)

39. (Previously Presented) The system of claim 52, wherein MIPv6-related information is transferred from the AAA server in the home network to a home agent in an AAA framework protocol application.

40. (Previously Presented) The system of claim 39, wherein the home agent is a local home agent in the visited network and the MIPv6-related information is transferred from the AAA home server to the local home agent via an AAA server in the visited network.

41. (Previously Presented) The system of claim 40, wherein the AAA framework protocol application is an application of a protocol selected from the group of Diameter and RADIUS.

42-50. (Canceled)

51. (Previously Presented) A method of authentication and authorization support for Mobile IP version 6 (MIPv6), comprising the steps of:

- encrypting authentication and authorization information in a mobile node operating in a visited network;

- sending the encrypted authentication and authorization information from the mobile node to a pass-through Authentication, Authorization and Accounting (AAA) client in the visited network utilizing a protocol for carrying authentication information for network access;

- forwarding the encrypted authentication and authorization information from the AAA client to a visited AAA server in the visited network without analyzing the encrypted authentication and authorization information by the AAA client;

- forwarding the encrypted authentication and authorization information from the visited AAA server in the visited network to a home AAA server in the mobile node's home network without analyzing the encrypted authentication and authorization information by the visited AAA server;

- performing an analysis of the encrypted authentication and authorization information by the home AAA server;

- sending a MIPv6-related challenge message from the home AAA server to the mobile node via the visited AAA server and the pass-through AAA client in the visited network based on the analysis of the encrypted authentication and authorization information, wherein the visited AAA server and the AAA client forward the challenge message without analyzing the challenge message contents;

- sending a MIPv6-related challenge response message from the mobile node to the home AAA server via the AAA client and the visited AAA server in the visited network, wherein the AAA client and the visited AAA server forward the challenge response message without analyzing the challenge response message contents;

- performing an analysis of the challenge response message contents by the home AAA server; and

- sending a MIPv6-related authentication and authorization results message from the home AAA server to the mobile node reporting a result of the analysis of the challenge response message contents and providing session parameter information.

52. (Previously Presented) A system for authentication and authorization support for MIPv6, comprising:

a mobile node operating in a visited network for encrypting authentication and authorization information and for sending the encrypted authentication and authorization information from the mobile node to a pass-through Authentication, Authorization and Accounting (AAA) node in the visited network utilizing a protocol for carrying authentication information for network access;

the pass-through AAA node for forwarding the encrypted authentication and authorization information to a home AAA server in the mobile node's home network without analyzing the encrypted authentication and authorization information;

the home AAA server for performing an analysis of the encrypted authentication and authorization information and for sending a MIPv6-related challenge message to the mobile node via the pass-through AAA node in the visited network based on the analysis of the encrypted authentication and authorization information, wherein the pass-through AAA node forwards the challenge message without analyzing the challenge message contents;

wherein the mobile node sends a MIPv6-related challenge response message to the home AAA server via the pass-through AAA node in the visited network, wherein the pass-through AAA node forwards the challenge response message without analyzing the challenge response message contents; and

wherein the home AAA server performs an analysis of the challenge response message contents by the home AAA server, and sends a MIPv6-related authentication and authorization results message to the mobile node reporting a result of the analysis of the challenge response message contents and providing session parameter information.